REMARKS

Claims 1-20 remain in the application for consideration. In view of the following remarks, Applicant respectfully requests that the application be forwarded on to issuance.

§ 103 Rejections

Claims 1-20 stand rejected under U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,639,943 to Radha et al. (hereinafter "Radha").

Before undertaking a discussion regarding the substance of the Office's rejections, the following discussion of the § 103 Standard is provided.

The § 103 Standard

To establish a prima facie case of obviousness, *three basic criteria must be met.* First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992); *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988). Second, there must be a reasonable expectation of success. *In re Merck & Co., Inc.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). The teaching or suggestion to make the claimed combination and the reasonable expectation of success *must* both be found in the prior art, not in applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1439 (Fed. Cir. 1991).

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1 Hence, when patentability turns on the question of obviousness, the search

2 for and analysis of the prior art includes evidence relevant to the finding of

3 whether there is a teaching, motivation, or suggestion to select and combine the

4 references relied on as evidence of obviousness. See, e.g., *McGinley v. Franklin*

5 *Sports, Inc.*, 262 F.3d 1339, 1351-52, 60 USPQ2d 1001, 1008 (Fed. Cir. 2001)

6 ("the central question is whether there is reason to combine [the] references," a

7 question of fact drawing on the Graham factors). The mere fact that references *can*

8 be combined or modified does not render the resultant combination obvious unless

9 the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d

10 680, 16 USPQ2d 1430 (Fed. Cir. 1990). "To support the conclusion that the

11 claimed invention is directed to obvious subject matter, either the references must

12 expressly or impliedly suggest the claimed invention or *the examiner must*

13 *present a convincing line of reasoning as to why the artisan would have found*

14 *the claimed invention to have been obvious in light of the teachings of the*

15 *references." Ex parte Clapp*, 227 USPQ 972, 973 (Bd.Pat. App. & Inter.

16 1985)(emphasis added).

17 Chapter 2100 of the MPEP provides further instruction as follows: "With

18 regard to rejections under 35 U.S.C. 103, the examiner must provide evidence

19 which as a whole shows that the legal determination sought to be proved (i.e., the

20 reference teachings establish a *prima facie* case of obviousness) is more probable

21 than not." *See* MPEP 2142.

22 "The factual inquiry whether to combine references must be thorough and

23 searching." *Id.* It must be based on objective evidence of record. This precedent

24 has been reinforced in myriad decisions, and cannot be dispensed with. See, e.g.,

25 *Brown & Williamson Tobacco Corp. v. Philip Morris Inc.*, 229 F.3d 1120, 1124-

25, 56 USPQ2d 1456, 1459 (Fed. Cir. 2000) ("a showing of a suggestion, teaching, or motivation to combine the prior art references is an 'essential component of an obviousness holding'") (quoting *C.R. Bard, Inc., v. M3 Systems, Inc.*, 157 F.3d 1340, 1352, 48 USPQ2d 1225, 1232 (Fed. Cir. 1998)); *In re Dembiczak*, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999) ("*Our case law makes clear that the best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references.*"); *In re Dance*, 160 F.3d 1339, 1343, 48 USPQ2d 1635, 1637 (Fed. Cir. 1998) (there must be some motivation, suggestion, or teaching of the desirability of making the specific combination that was made by the applicant); *In re Fine*, 837 F.2d 1071, 1075, 5 USPQ2d 1596, 1600 (Fed. Cir. 1988) ("'teachings of references can be combined only if there is some suggestion or incentive to do so.'") (emphasis in original) (quoting *ACS Hosp. Sys., Inc. v. Montefiore Hosp.*, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984)); *In re Fritch*, 23 USPQ2d 1780, 1784 (Fed. Cir. 1992) ("*It is impermissible to use the claimed invention as an instruction manual or 'template' to piece together the teachings of the prior art so that the claimed invention is rendered obvious. [O]ne cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.*") (quoting *In Re Fine*, 837 F.2d 1071, 1075, 5 USPQ2d 1596, 1600 (Fed. Cir. 1988)).

The need for specificity pervades this authority. See, e.g., *In re Kotzab*, 217 F.3d 1365, 1371, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000) ("particular findings must be made as to the reason the skilled artisan, with no knowledge of

the claimed invention, would have selected these components for combination in the manner claimed").

Applicant disagrees with the Office's obviousness rejections and respectfully submits that the Office has not made out a *prima facie* case of obviousness. Accordingly, Applicant respectfully requests withdrawal of these rejections.

Claims Rejected over Radha under § 103

Claim 1 recites method of processing media content, the method comprising:

- generating a motion compensated prediction of a region of media content;
- *receiving an indication of whether there are first and second quantities of residual samples remaining for refining the prediction, on a per-region basis*; and
- adding of the first quantity of residual samples to the prediction to generate a refined prediction value, when so indicated; and
- *subtracting the second quantity of residual samples from the refined prediction value to generate a final representation, when so indicated.*

The Office, in its Office Action dated July, 15, 2004, argued that:

> Although Radha fails to show the subtraction as claimed, Radha *could show* subtraction of the data *if* the residual samples were negative. The Examiner notes that the operations of adding a negative and subtracting yield equivalent outputs. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to implement adding negative numbers or subtracting in order to obtain an apparatus that becomes more diverse by being able to accommodate a wider range of numbers (positive and negative). (emphasis added).

In response to the Office Action dated July 15, 2004, Applicant argued:

Applicant agrees that Radha *fails to show the subtraction as claimed*. Applicant disagrees with the Office's obviousness rejection and reminds the Office that *the prior art reference* must teach or suggest all the claim limitations.

In addition, Applicant points out that there is no *suggestion or motivation* to subtract residual samples, nor any reasonable *expectation of success* from doing so. Hence, for at least this reason, the Office has failed to establish a *prima facie* case of obviousness.

In its current Office Action, dated January 11, 2005, the Office responded to Applicant's argument by stating:

"The examiner notes that one of ordinary skill in the art would understand that within the parameters of mathematics, *addition could be a subtraction*. The examiner further notes that *adding negative numbers is a subtraction*, which is a fact, not a conjecture. Further note Radha, column 8, lines 15-18, wherein Radha discloses the use of a subtracter. (See page 2, Response to Arguments) (emphasis added).

Additionally, the Office states:

Although Radha fails to show the subtraction as claimed, Radha *does show* subtraction of the data *if* the residual samples were negative. The Examiner notes that the operations of adding a negative and subtracting yield equivalent outputs. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to implement adding negative numbers or subtracting in order to obtain an apparatus that becomes more diverse by being able to accommodate a wider range of numbers (positive and negative). (emphasis added)

Applicant agrees that Radha fails to show the subtraction as claimed. Applicant is confused as to how the assertion *"adding negative numbers is a subtraction"* is applicable to the subject matter of this claim. Specifically, the subject matter of this claim recites subtracting the *second quantity of residual samples*. Furthermore, after searching the Radha reference, Applicant has failed to find any reference to "adding negative numbers" in regards to adding residual images.

Applicant vigorously submits that whether one of ordinary skill in the art would understand that *adding negative numbers is a subtraction* has no bearing on the fact that Radha fails to show subtracting the *second quantity of residual samples*, as claimed. Nor does the knowledge that *adding negative numbers is a subtraction* make subtracting the second quantity of residual samples obvious. Furthermore, Applicant fails to see how column 8, lines 15-18, of Radha is relevant. This excerpt simply describes how a *residual image is generated* by a subtracter. Thus, the Office's reliance on this excerpt is misplaced. This excerpt (Radha, column 8, lines 14-18) is reproduced below:

> A *residual image is generated by a subtracter* 130 that subtracts the output from the input of quantization block 90. Further, a MC *residual image is directly generated* at the upper output of the functional block 122. (emphasis added).

Accordingly, the Office's argument that "Radha *does show* subtraction of the data *if* the residual samples *were negative*" merely speculates about what Radha *could*, but *does not* show. Applicant respectfully reminds the Office that *the prior art reference* must teach or suggest all the claim limitations. In addition,

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Applicant points out that there is no *suggestion or motivation* to subtract residual samples, nor any reasonable *expectation of success* from doing so. Hence, for at least this reason, the Office has failed to establish a *prima facie* case of obviousness.

Applicant respectfully submits that the Office has clearly used hindsight reconstruction by speculating on what Radha *could*, but *does not* show - an act that has been specifically proscribed by the Federal Circuit. In addition, Applicant respectfully submits that what Radha *could* do is completely irrelevant to a legally proper analysis under §103. Applicant can find no guidance in the line of cases set out above that indicates that what a reference *could* show is relevant

Finally, the Office argues that Radha discloses *"receiving an indication of whether there are first and second quantities of residual samples remaining"*. Specifically, the Office refers to figures 5A and 8A stating: "wherein the indication is the process from moving from one layer to the next, the residual samples are contained with the enhancement and base layers". Applicant submits that this line of reasoning is not clearly explained as required by MPEP 706.02(j). MPEP 706.02(j) states in pertinent part: "it is important that the written record clearly explain the rationale for decisions made during prosecution of the application." It is unclear, from these drawings, how the "process from moving from one layer to the next" discloses *receiving an indication*, as claimed. In addition, the Office fails to address the remaining portion of this claim element, i.e. "for refining the prediction, on a per-region basis."

In view of the above discussion, the Office has not established a *prima facie* case of obviousness. Hence, for at least these reasons, this claim is allowable.

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Claims 2-9 depend from claim 1 and are allowable as depending from an allowable base claim. These claims are also allowable for their own recited features which, in combination with those recited in claim 1, are neither disclosed nor suggested in the references of record, either singly or in combination with one another.

Claim 10 recites a medium comprising a plurality of executable instructions which, when executed, implement a decoder of media content to generate a motion compensated prediction of at least a region of media content, *to receive an indication of one or more sets of samples of residual information to further refine the prediction*, and to add a first set of such samples to the prediction to generate a modified prediction, if indicated, *and to subtract a second set of such samples from the modified prediction to generate a final motion compensated prediction of the region, if indicated.*

In making out the rejection of this claim, the Office proffers the same argument as that in claim 1. Applicant disagrees and traverses the rejection.

As noted above, the Office's line of reasoning does not establish a *prima facie* case of obviousness. For at least these reasons, this claim is allowable.

Claims 11-14 depend from claim 10 and are allowable as depending from an allowable base claim. These claims are also allowable for their own recited features which, in combination with those recited in claim 10, are neither disclosed nor suggested in the references of record, either singly or in combination with one another.

Claim 15 recites a computing system comprising:

- a decoder application to receive a region of media content and control generation of decoded media content; and

- *an application program interface (API), communicatively coupling the decoder application with a hardware accelerator,* wherein if the API receives an indication of one or more sets of residual samples, the first set of samples is added to a motion compensated prediction to generate a refinement of a prediction value, when so indicated, and *a second set of samples is subtracted from the refined prediction value to generate a final representation, when so indicated.*

In making out the rejection of this claim, the Office argues that "Radha discloses the complementary decoder performing the operations of the encoder disclosed in the preceding claims." The Office continues by stating: "The decoder also comprises an 'application program interface' (Radha column 9, lines 57-59, wherein the interface is the application that runs to obtain the user input)."

Applicant disagrees with the Office's obviousness rejection and submits that the Office has not explained the pertinence of Radha to this claim, or offered any explanation of the basis for its rejection. See MPEP 707.05 (pertinence of cited prior art should be pertinence should be explained) and MPEP 707.07(d) (grounds for rejection fully and clearly stated). Specifically, the Office has not cited or otherwise referenced any portion of Radha to support its statement that "Radha discloses the complementary decoder performing the operations of the *encoder* disclosed in the preceding claims." Furthermore, Applicant is unsure which "*encoder*" the Office is referring to. *Applicant requests that the grounds for this rejection be fully and clearly stated.*

In addition, the portion of Radha cited by the Office *does not mention an "application program interface" or "API".* Column 9, lines 57-61 are reproduced below for the Office's convenience:

This determination also can be based on the available bandwidth and/or the user input 30. After this determination is

performed, the video rate controller 18 outputs images to the variable-bandwidth network 43 as a BL stream, temporal EL stream and FGS EL stream.

In fact, Applicant was unable to find a reference to any application program interface (or API) communicatively coupling a decoder application with a hardware accelerator anywhere in the Radha reference. The Office, in its current response, dated January 11, 2005, responds to this argument by stating "[t]he examiner notes that an application interface must be present in order to transfer an input from a user into a system." Applicant traverses this assertion by the Office and specifically requests that documentary evidence, pursuant to MPEP 2144.03(c) and 37 CFR 1.104(c)(2), be supplied to support the Office's contention. Furthermore, applicant submits that Radha does not disclose an application program interface (API), *communicatively coupling the decoder application with a hardware accelerator*, as claimed.

Perhaps more importantly, and as pointed out above, the Office has reached its conclusion, with respect to the recited second set of samples being subtracted from the refined prediction, based upon legally inappropriate and unsupported reasoning.

As discussed above and for all of the reasons set forth above, the Office's reasoning in this regard has not established a *prima facie* case of obviousness. For at least these reasons, this claim is allowable.

Claims 16-20 depend from claim 15 and are allowable as depending from an allowable base claim. These claims are also allowable for their own recited features which, in combination with those recited in claim 15, are neither disclosed

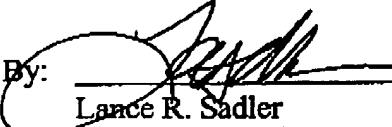nor suggested in the references of record, either singly or in combination with one another.

Conclusion

All of the claims are in condition for allowance. Accordingly, Applicant requests a Notice of Allowability be issued forthwith. If the Office's next anticipated action is to be anything other than issuance of a Notice of Allowability, Applicant respectfully requests a telephone call for the purpose of scheduling an interview.

Respectfully Submitted,

Dated: 4/11/05

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